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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,638	01/21/2004	Brad Menzies	65,748-865	3342

27305 7590 12/13/2006

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EXAMINER

LUONG, VINH

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/761,638

Applicant(s)

MENZIES, BRAD

Examiner

Vinh T. Luong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 14-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.


**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
Vinh T. Luong  
Primary Examiner

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/21/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: Attachments 1-3.

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1. The information disclosure statement filed January 21, 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document (EP 0748713); each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

2. The drawings are objected to because:

(a) The drawings are inconsistent with the specification. For example, the Brief Description of the Several Views of the Drawings describes lines 4A-4A and 4B-4B, however, the drawings do not show lines 4A-4A and 4B-4B; and

(b) The drawings are not in compliance with 37 CFR 1.84. For example, 37 CFR 1.84(h)(3) requires that "[a] cross section must be set out and drawn to show all of the materials as they are shown in the view from which the cross section was taken." Nevertheless, Figs. 4A and 4B do not show the materials of detent members 54 and 56 as seen in Fig. 1.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The disclosure is objected to because of the following informalities: the drawings are inconsistent with the specification. For example, the Brief Description of the Several Views of the Drawings describes lines 4A-4A and 4B-4B, however, the drawings do not show lines 4A-4A and 4B-4B. Appropriate correction is required.

4. Claims 1-19 are objected to because of the following informalities: the claims contain grammatical or typographical error, e.g., "comprising;" in claims 1 and 17 should have been changed to - - comprising: - -.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "near" in claim 17 is a relative term which renders the claim indefinite. The term "near" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For example, it is unclear what dimension of the distance from the chamber to the pedal arm is required so that the chamber is considered as being "near said pedal arm."

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7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis (US Patent No. 6,418,813 B1 cited by Applicant).

Regarding claim 1, Lewis teaches a kickdown mechanism (10) for use with a pedal arm to provide a kickdown feel to an operator of the pedal arm (not shown), said mechanism comprising:

a housing (12) defining a chamber (14),

a resilient member (38, 31, Fig. 2) presenting a bearing surface (35) movable within said chamber (14) along an operational axis (A, see Attachment 1, hereinafter "Att. 1"),

a detent member (52) in contact with said bearing surface (35) and movable between an initial position and a plurality of active positions against a biasing force of said resilient member (38, 31) while maintaining contact with said bearing surface (35) whereby a force required to move said detent member (52) from said initial position to said plurality of active positions provides the kickdown feel to the operator, and

an actuator (32) engaging said detent member (52) for moving said detent member (52) from said initial position to said plurality of active positions when engaged by the pedal arm, said assembly characterized by said bearing surface (35) being disposed at an acute angle ( $\alpha_1$ . See Att. 1) to said operational axis (A) to urge said detent member (52) back to said

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initial position under the bias of said resilient member (38, 31) when the pedal arm is disengaged from said actuator (32).

Claim 1 is anticipated by Lewis because Lewis teaches each claimed element in the claim. Note that claim 1 does not specifically recite any shape of the bearing surface. Therefore, Lewis's angle defined by a tangent of Lewis' arcuate bearing surface and the operational axis "reads on" the claimed angle.

Regarding claim 4, said resilient member (38, 31) presents a second bearing surface (Att. 1) positioned at a second acute angle ( $\alpha_2$ . See Att. 1) to said operational axis (A).

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis.

Regarding claims 2 and 3, Lewis's acute angle ( $\alpha_1$ . See Att. 1) is of a determined degree as seen in Fig. 3.

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It is common knowledge in the art to change Lewis's acute angle to between 30°-60° or 45° in order to provide a reliable and cost effective kickdown mechanism. See column 3, line 1+.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to change Lewis's acute angle to between 30°-60° or 45° in order to provide a reliable and cost effective kickdown mechanism as taught or suggested by common knowledge in the art. The degrees of Lewis' angle would have been an obvious choice in design because the claimed structure and the function it performs are the same as the prior art. *In re Chu*, 66 F.3d 292, 36 USPQ2d 1089 (Fed. Cir. 1995) citing *In re Gal*, 980 F.2d 717, 719, 25 USPQ2d 1076, 1078 (Fed. Cir. 1992). See also MPEP 2144.05.

10. Claims 1 and 4-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marquardt et al. (US Patent No. 6,446,500).

Regarding claim 1, Marquardt teaches a kickdown mechanism (10) for use with a pedal arm to provide a kickdown feel to an operator of the pedal arm (6), said mechanism comprising:

a housing (20) defining a chamber (Attachment 2, hereinafter "Att. 2"),

a resilient member (28, Att. 2) presenting a bearing surface (Att. 2) movable within said chamber (Att. 2) along an operational axis (Att. 2),

a detent member (44a) in contact with said bearing surface (Att. 2) and movable between an initial position and a plurality of active positions against a biasing force of said resilient member (Att. 2) while maintaining contact with said bearing surface (Att. 2) whereby a force required to move said detent member (44a) from said initial position to said plurality of active positions provides the kickdown feel to the operator, and

an actuator (22) engaging said detent member (44a) for moving said detent member (44a) from said initial position to said plurality of active positions when engaged by the pedal arm 6, said assembly characterized by said bearing surface (Att. 2) being disposed at about 90° angle ( $\alpha_1$ . See Att.) to said operational axis (A) to urge said detent member (44a) back to said initial position under the bias of said resilient member (28, Att. 2) when the pedal arm 6 is disengaged from said actuator (22).

Marquardt teaches the invention substantially as claimed. Ibid. column 6, lines 6-64 and claims 1-36. However, Marquardt's angle is about 90° instead of 30°-60° or 45°.

It is common knowledge in the art to change Marquardt's angle to between 30°-60° or 45° in order to provide an easily desired, precisely determined jump in force. See column 3, lines 30-38.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to change Marquardt's angle to between 30°-60° or 45° in order to provide an easily desired, precisely determined jump in force as taught or suggested by common knowledge in the art. The degrees of Marquardt's angle would have been an obvious choice in design because the claimed structure and the function it performs are the same as the prior art. *In re Chu* and MPEP 2144.05, *supra*.

Regarding claim 4, said resilient member (28, Att. 2) presents a second bearing surface (Att. 2) positioned at a second 90° angle ( $\alpha_2$ . See Att. 2) to said operational axis (A).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to change Marquardt's second 90° angle to between 30°-60° or 45° in order to provide an easily desired, precisely determined jump in force as taught or suggested by



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common knowledge in the art. The degrees of Marquardt' second angle would have been an obvious choice in design because the claimed structure and the function it performs are the same as the prior art. *In re Chu* and MPEP 2144.05, *supra*.

Regarding claim 5, a second detent member (44b) in contact with said second bearing surface (Att. 2) and movable between an initial position and a plurality of active positions against the bias of said resilient member (28, Att. 2) while maintaining contact with said second bearing surface (Att. 2).

Regarding claim 6, said detent members (44a, 44b) and said bearing surfaces (Att. 2) mirror one another relative to said operational axis (A).

Regarding claim 7, said housing (20) includes a sidewall (Att. 2) and said sidewall (Att. 2) defines first and second pairs of detent pockets (at 34a and 34b in Fig. 6, Att. 2) for receiving said detent members (44a, 44b).

Regarding claim 8, said first and second bearing surfaces (Att. 2) define a wedge between said detent members (44a, 44b) for urging said detent members (44a, 44b) into said detent pockets (Att. 2) under the bias of said resilient member (28, Att. 2).

Regarding claim 9, a plurality of shoulders (Att. 2) formed in said chamber (Att. 2) to further define said detent pockets (Att. 2) and urge said detent members (44a, 44b) out from said detent pockets (Att. 2) when said detent members (44a, 44b) are moved by said actuator (22) wherein each of said detent members (44a, 44b) move radially and axially along said bearing surfaces (Att. 2) toward said operational axis (A) as said detent members (44a, 44b) move out from said detent pockets (Att. 2).

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Regarding claim 10, said detent pockets (Att. 2) and said shoulders (Att. 2) are disposed in upper and lower portions (Att. 2) of said chamber (Att. 2) to provide a balance of forces acting upon said kickdown mechanism relative to said operational axis (A).

Regarding claim 11, said resilient member (28, Att. 2) is further defined as a plunger (Att. 2) biased by a spring (28) between said housing (20) and said plunger (Att. 2).

Regarding claim 12, said actuator (22) includes a front end and a projection (22) protruding from said front end for engaging the pedal arm (6) as seen in Fig. 1.

Regarding claim 13, said housing (20) includes a sidewall (Fig. 8, Att. 2) and a first pair of elongated slots (Att. 2) defined therein and said actuator (22) includes a first pair of guide members (Att. 2) for reciprocating within said first pair of slots (Att. 2).

12. Claims 17-19, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Marquardt et al.

Regarding claim 17, Marquardt teaches a pedal assembly, comprising: a pedal housing (4, Figs. 1 and 2), a pedal arm (6) pivotally supported by said pedal housing (4), a kickdown housing (10) defining a chamber (Att. 2) near said pedal arm (6), a plurality of detent pockets (Att. 2) in said chamber (Att. 2), and an operational axis (Att. 2) through said chamber (Att. 2), a plunger (Att. 2) slidable within said chamber (Att. 2) along said operational axis (Att. 2), a spring (28) disposed between said kickdown housing (20) and said plunger (Att. 2) for biasing said plunger (Att. 2) axially along said operational axis (Att. 2), a pair of detent members (44a, 44b) seated within said detent pockets (Att. 2) and moveable out from said detent pockets (Att. 2) against the bias of said plunger (Att. 2) whereby a force required to move said detent members (44a, 44b) out from said detent pockets (Att. 2) provides a kickdown feel to an operator, and an

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actuator (22) for moving said detent members (44a, 44b) out from said detent pockets (Att. 2) when engaged by said pedal arm (6), said assembly characterized by said plunger (Att. 2) defining a wedge between said detent members (44a, 44b) for urging said detent members (44a, 44b) back into said detent pockets (Att. 2) under the bias of said plunger (Att. 2) when said pedal arm (6) is disengaged from said actuator (22).

Regarding claim 18, an electrical generator (12) supported by said pedal housing (4) for generating a control signal that varies in magnitude in proportion to the extent of movement of said pedal arm (6) relative to said pedal housing (4).

Regarding claim 19, an adjustment device (i.e., a bracket in Figs. 1 and 2. See Att. 2) for adjusting a position of the kickdown mechanism 10 relative to the pedal arm 6 (see two different positions of the kickdown 10 in Figs. 1 and 2) to synchronize movement of the detent members (44a, 44b) out from the detent pockets (Att. 2) with generation of the control signal at a predetermined magnitude.

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 17 and 18, as best understood, are further rejected under 35 U.S.C. 102(e) as being anticipated by Sakamoto et al. (US Patent No. 6,626,061 B2 cited by Applicant)

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Regarding claim 17, Sakamoto teaches a kickdown mechanism (10) for use with a pedal arm to provide a kickdown feel to an operator of the pedal arm (not shown), said mechanism comprising:

a housing (4),

a kickdown housing (9. See Attachment 3, hereinafter "Att. 3) defining a chamber (Att. 3) near said pedal arm (1), a plurality of detent pockets (Att. 3) in said chamber (Att. 3), and an operational axis (Att. 3) through said chamber (Att. 3),

a plunger 10 (Att. 3) slidable within said chamber (Att. 3) along said operational axis (Att. 3),

a spring (12) disposed between said kickdown housing (9) and said plunger 10 (Att. 3) for biasing said plunger 10 (Att. 3) axially along said operational axis (Att. 3),

a pair of detent members 14 (Att. 3) seated within said detent pockets (Att. 3) and moveable out from said detent pockets (Att. 3) against the bias of said plunger 10 (Att. 3) whereby a force required to move said detent members (14) out from said detent pockets (Att. 3) provides a kickdown feel to an operator, and an actuator (10, Att. 3) for moving said detent members (14) out from said detent pockets (column 4, lines 47-65) when engaged by said pedal arm (1),

said assembly characterized by said plunger (10) defining a wedge (Att. 3) between said detent members (14) for urging said detent members (14) back into said detent pockets (Att. 3) under the bias of said plunger (10) when said pedal arm (1) is disengaged from said actuator (Att. 3).

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Regarding 18, an electrical generator (S) supported by said pedal housing (4) for generating a control signal that varies in magnitude in proportion to the extent of movement of said pedal arm (1) relative to said pedal housing (4).

15. Claims 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Japanese Utility Model No. 2005-126022 (Figs. 2-14), Heinrich (wedge 6), and Peniston et al. (wedge in Fig. 5).

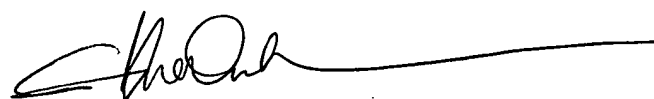
18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinh T. Luong whose telephone number is 571-272-7109. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Luong

December 7, 2006



Vinh T. Luong  
Primary Examiner

# **ATTACHMENT 1**

# **ATTACHMENT 2**

# **ATTACHMENT 3**



FIG. 1

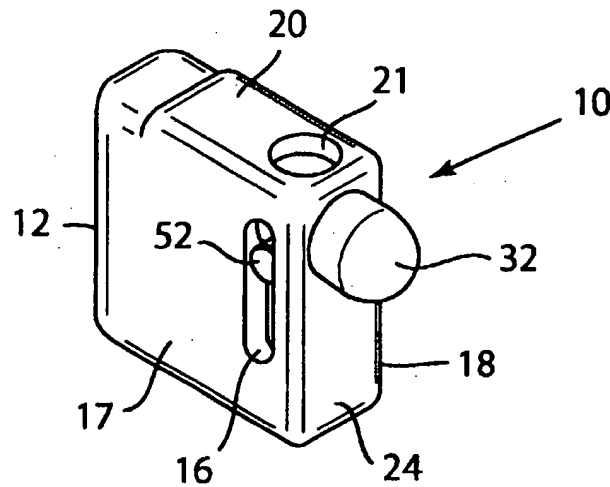
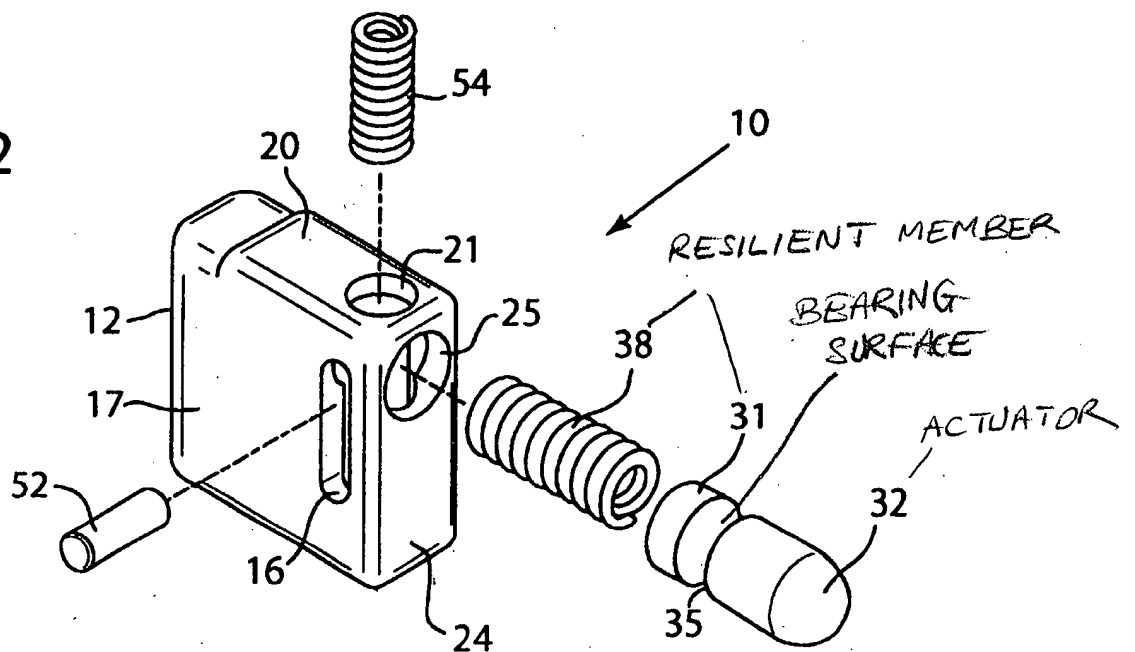
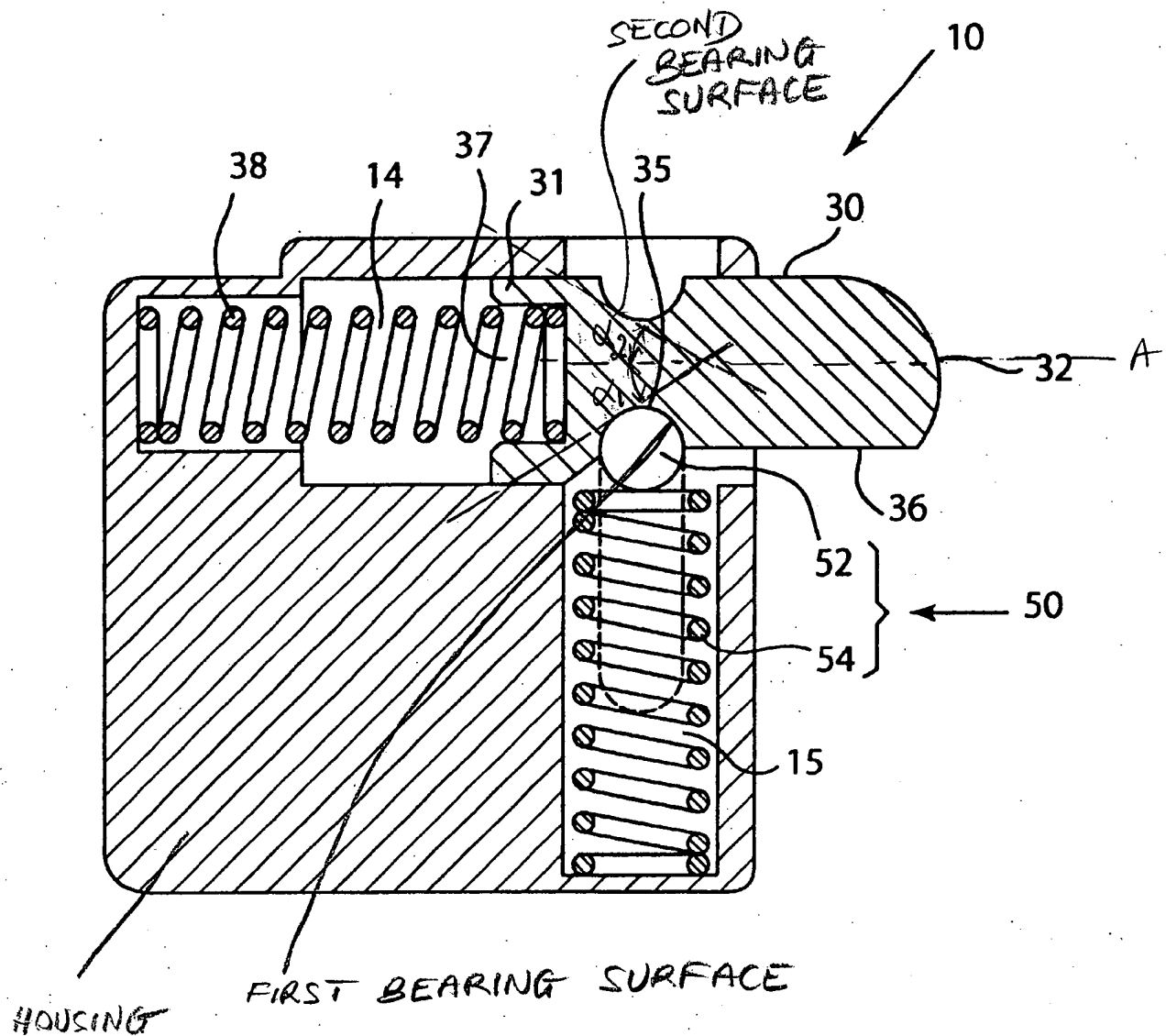


FIG. 2



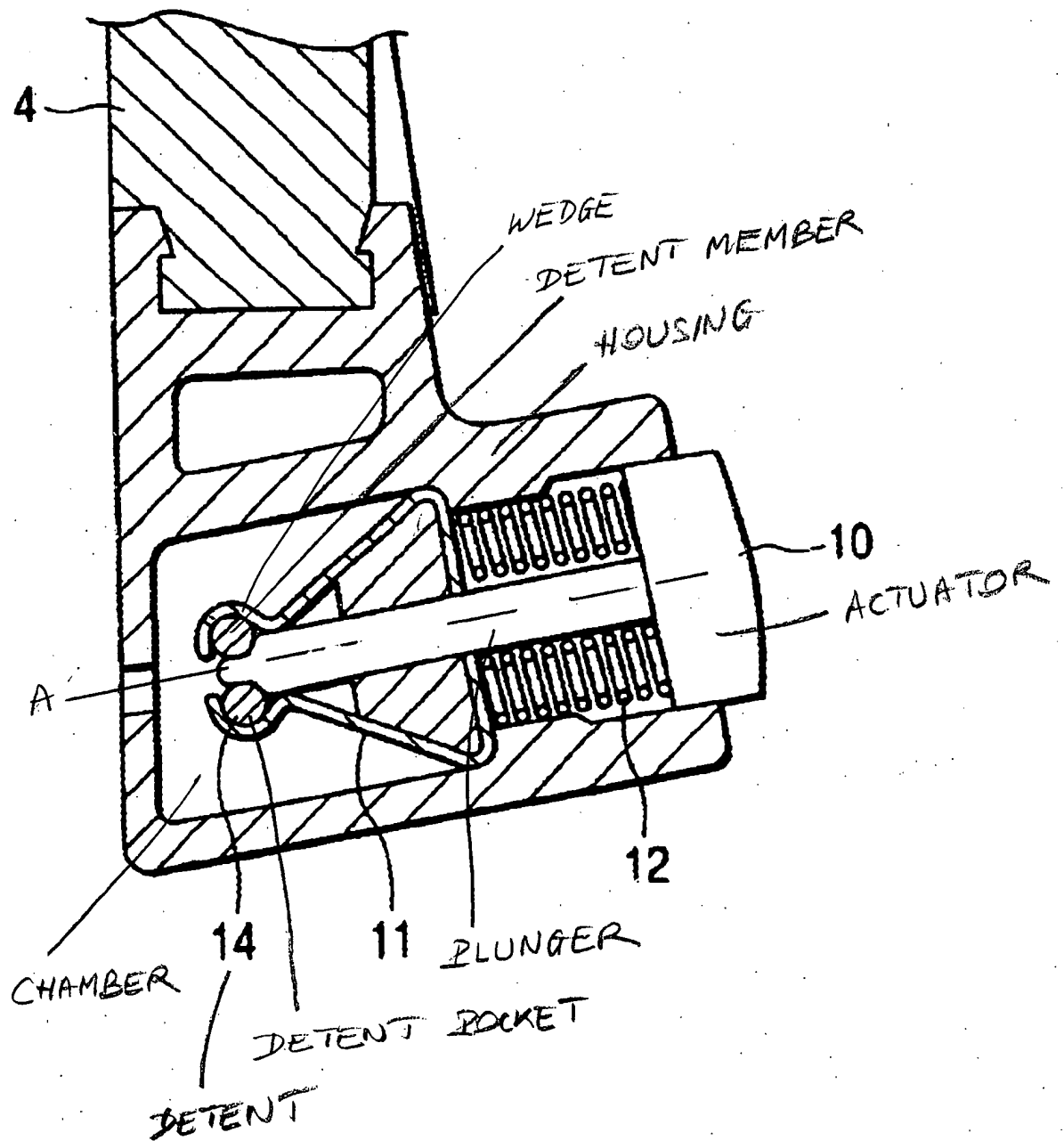
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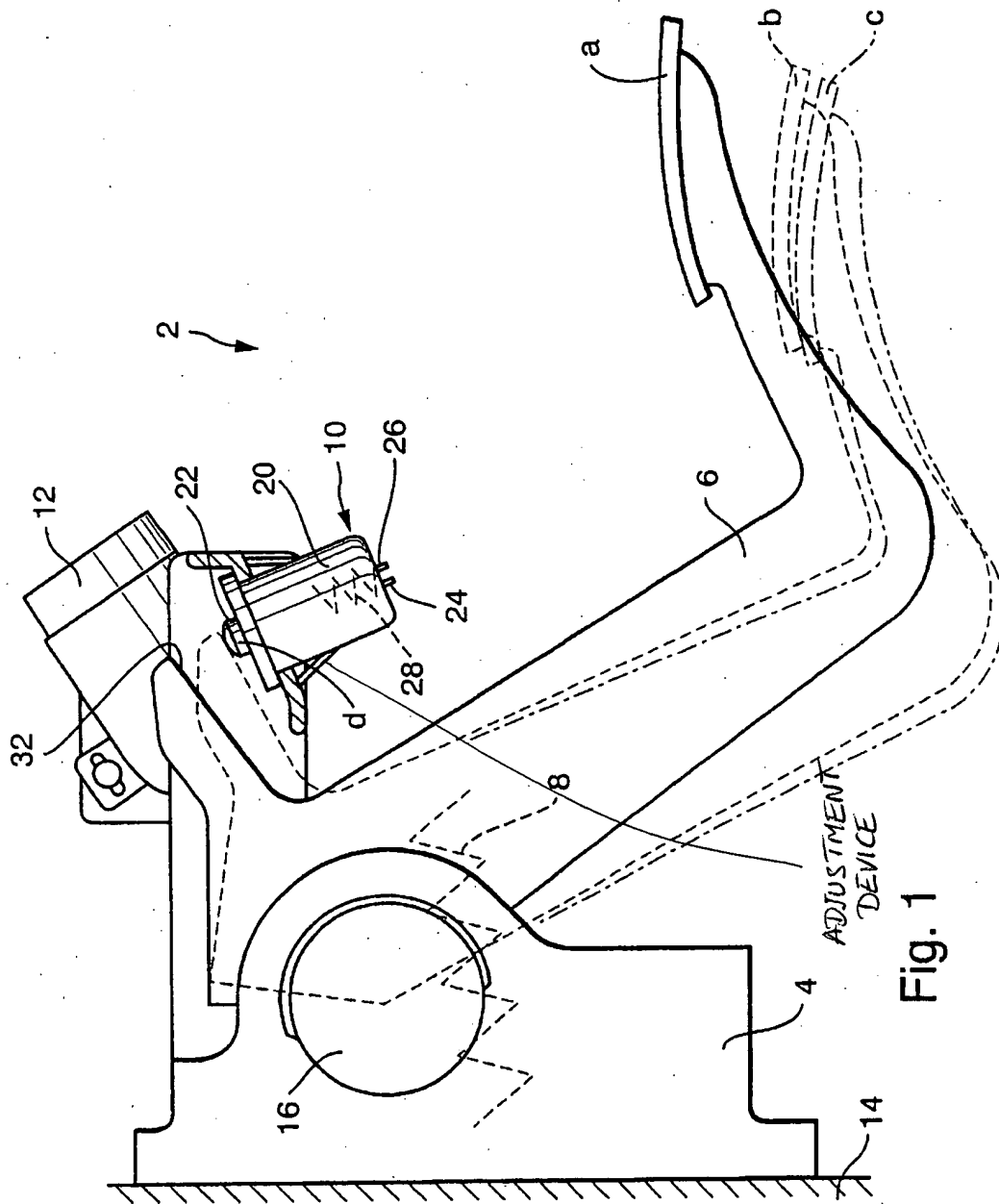
FIG. 3



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# FIG. 2





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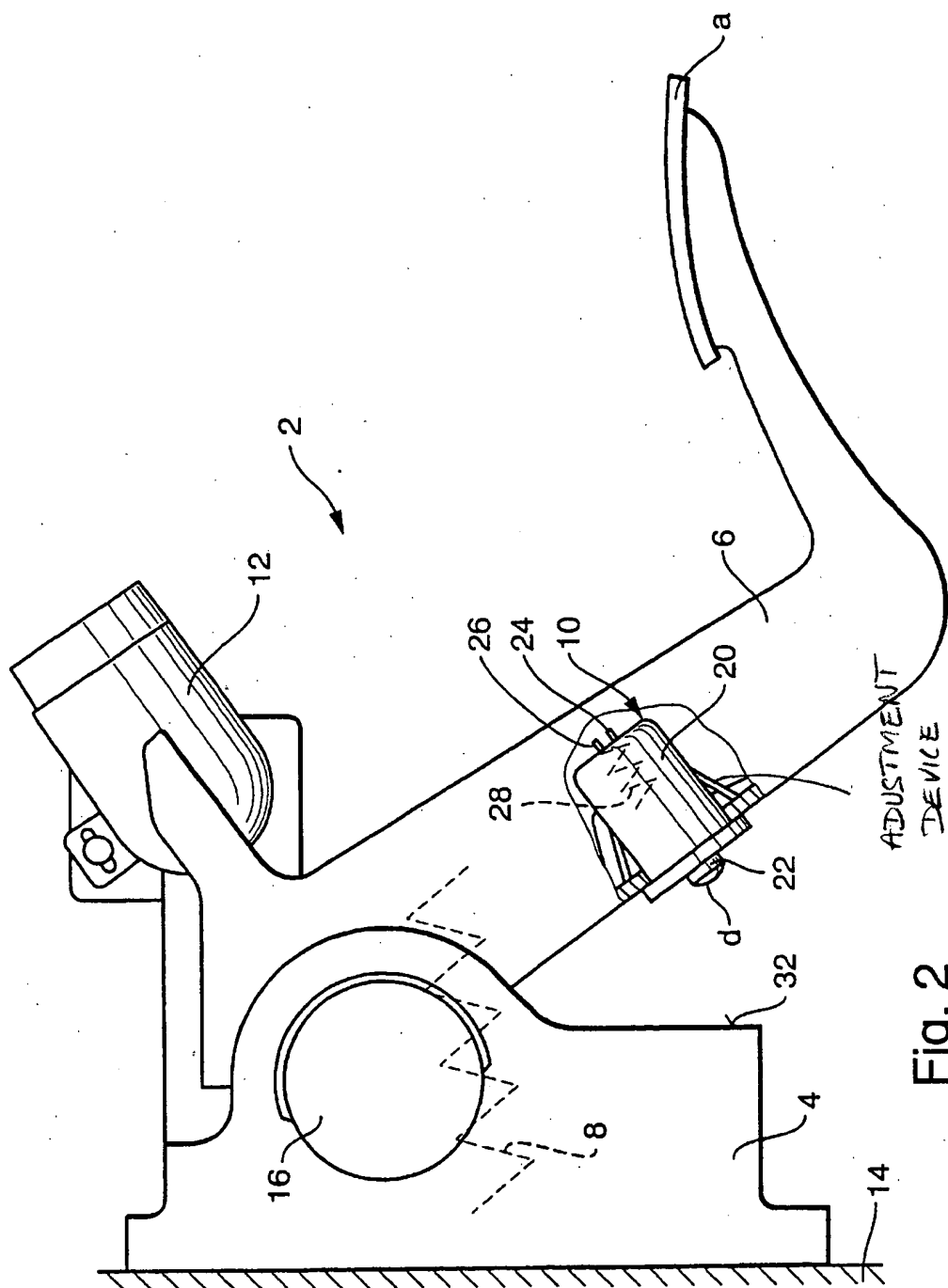
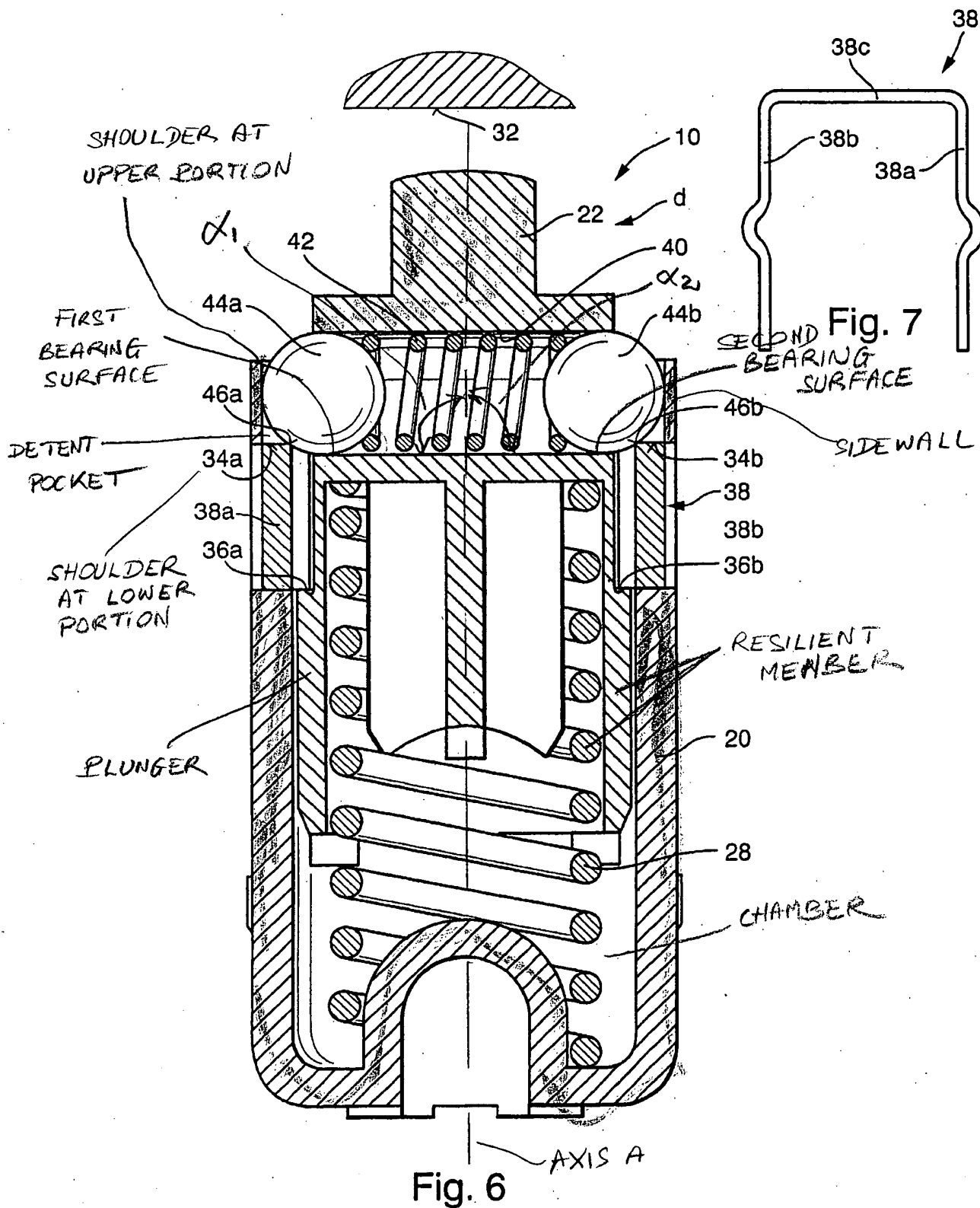


Fig. 2

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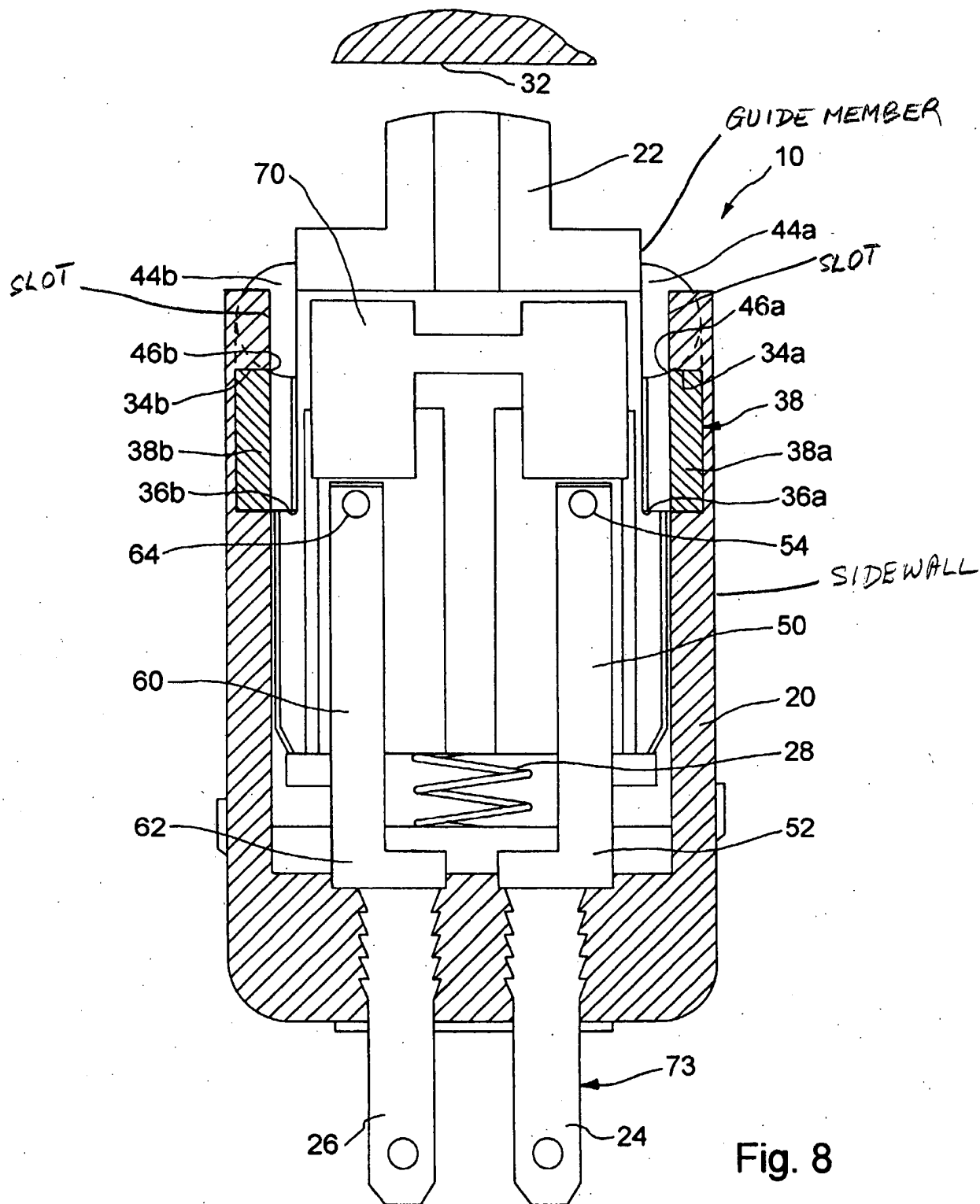


Fig. 8